

What is claimed is:

1. An image pickup apparatus comprising:
 - a taking lens;
 - 5 a main body;
 - an image pickup device that receives light passing through said taking lens and outputs an image signal;
 - a photometric device that receives the light passing through said taking lens and outputs luminance
 - 10 information;
 - a control circuit that sets an exposure compensation value according to an output from said photometric device;
 - wherein said control circuit sets a first exposure compensation value according to the luminance
 - 15 information outputted from said photometric device, to cause said image pickup device to carry out a first storage of the light passing through said taking lens, based on the set first exposure compensation value, and
 - 20 sets a second exposure compensation value according to a result of the first storage, to cause said image pickup device to carry out a second storage of the light passing through said taking lens, based on the set second exposure compensation value.
- 25 2. An image pickup apparatus as claimed in claim 1, wherein said taking lens is removably attached to said main body, and said control circuit acquires

information on characteristics of said taking lens from said taking lens and sets the exposure compensation value according to the luminance information outputted from said photometric device and the information on 5 characteristics of said taking lens to cause said image pickup device to carry out the first storage.

3. An image pickup apparatus as claimed in claim 1, further comprising a mirror element, and wherein the light passing through said taking lens reaches said 10 photometric device when said mirror element is in a first position, and the light passing through said taking lens does not reach said photometric device when said mirror element is in a second position.

4. An image pickup apparatus as claimed in claim 15 3, further comprising an eyepiece lens used in observing a subject by a user, and an optical element that divides the light passing through said taking lens into light reaching said photometric device and light reaching said eyepiece lens.

20 5. An image pickup apparatus as claimed in claim 1, wherein said photometric device outputs luminance information a plurality of pieces of luminance information for a plurality of areas into which a photographic screen is divided.

25 6. An image pickup apparatus as claimed in claim 1, wherein said first and second exposure compensation values each include at least one of a storage time and

an output amplification factor of said image pickup device, and said control circuit causes said image pickup device to carry out the first storage by changing the one of the storage time and the output 5 amplification factor based on the first exposure compensation value, and causes said image pickup device to carry out the second storage by changing the one of the storage time and the output amplification factor based on the second exposure compensation value.

10 7. An image pickup apparatus comprising:
a taking lens;
a main body;
an image pickup device that receives light passing through said taking lens and generates an image signal;

15 a photometric device disposed at a location different from a location at which said image pickup device is disposed, for receiving the light passing through said taking lens and outputting luminance information;

20 a mirror element movably disposed between said taking lens and said image pickup device, for reflecting the light passing through said taking lens in a direction different from said image pickup device;
an optical element disposed between said

25 photometric device and said mirror element, for guiding light reflected from said mirror element to said photometric device;

a control circuit that sets an exposure compensation value according to an output from said photometric device;

wherein said control circuit sets a first exposure compensation value according to the luminance information outputted from said photometric device, to cause said image pickup device to carry out a first storage of the light passing through said taking lens, based on the set first exposure compensation value, and

sets a second exposure compensation value according to a result of the first storage, to cause said image pickup device to carry out a second storage of the light passing through said taking lens, based on the set second exposure compensation value.

8. An image pickup apparatus as claimed in claim 7, wherein the light passing through said taking lens reaches said photometric device when said mirror element is in a first position, and the light passing through said taking lens does not reach said photometric device when said mirror element is in a second position.

9. An image pickup apparatus as claimed in claim 7, further comprising an eyepiece lens used in observing a subject by a user, and wherein said optical element divides the light reflected from said mirror element into light reaching said photometric device and light reaching said eyepiece lens.

10. A control method for an image pickup apparatus including a taking lens, a main body, an image pickup device that receives light passing through the taking lens and outputs an image signal, and a 5 photometric device that receives the light passing through the taking lens and outputs luminance information, the control method comprising:

a photometric step of causing the photometric device to calculate field luminance information;

10 10 a first compensation step of setting a first exposure compensation value based on the field luminance information calculated in said photometric step;

a first storage step of causing the image pickup device to carry out a first storage of the light passing through the taking lens, based on the first exposure compensation value set in said first compensation step;

15 20 a second compensation step of setting a second exposure compensation value according to a result of the first storage carried out in said first storage step; and

a second storage step of causing the image pickup device to carry out a second storage of the light passing through the taking lens, based on the second exposure compensation value set in said second compensation step.

11. A control method as claimed in claim 10,
wherein the taking lens is removably attached to the
main body, and in said first compensation step,
information on characteristics of said taking lens is
5 acquired from the taking lens and the exposure
compensation value is set according to the information
on characteristics of the taking lens and the luminance
information.

12. A control method for an image pickup
10 apparatus including a taking lens, an image pickup
device, and a photometric device disposed at a location
different from a location at which the image pickup
device is disposed, the image pickup apparatus being
capable of switching between a state in which light
15 passing through the taking lens is caused to reach the
photometric device, and a state in which the light
passing through the taking lens is not caused to reach
the photometric device, the control method comprising:
a photometric step of causing the photometric
20 device to determine field luminance information;
a first compensation step of setting a first
exposure compensation value based on the field
luminance information determined in said photometric
step;
25 a first storage step of causing the image pickup
device to carry out a first storage of the light
passing through the taking lens, based on the first

exposure compensation value set in said first compensation step;

a second compensation step of setting a second exposure compensation value according to a result of 5 the first storage carried out in said first storage step; and

a second storage step of causing the image pickup device to carry out a second storage of the light passing through the taking lens, based on the second 10 exposure compensation value set in said second compensation step.

13. A control method as claimed in claim 12, wherein the light passing through the taking lens is caused to reach only one of the image pickup device and 15 the photometric device.

14. A computer-readable program for implementing a control method for an image pickup apparatus including a taking lens, a main body, an image pickup device that receives light passing through the taking 20 lens and outputs an image signal, and a photometric device that receives the light passing through the taking lens and outputs luminance information, the program comprising:

a photometric module for causing the photometric 25 device to calculate field luminance information; a first compensation module for setting a first exposure compensation value based on the field

luminance information calculated by said photometric module;

5 a first storage module for causing the image pickup device to carry out a first storage of the light passing through the taking lens, based on the first exposure compensation value set by said first compensation module;

10 a second compensation module for setting a second exposure compensation value according to a result of the first storage carried out by said first storage module; and

15 a second storage module for causing the image pickup device to carry out a second storage of the light passing through the taking lens, based on the second exposure compensation value set by said second compensation module.

15. A computer-readable program for implementing a control method for an image pickup apparatus including a taking lens, an image pickup device, and a 20 photometric device disposed at a location different from a location at which the image pickup device is disposed, the image pickup apparatus being capable of switching between a state in which light passing through the taking lens is caused to reach the 25 photometric device, and a state in which the light passing through the taking lens is not caused to reach the photometric device, the program comprising:

- a photometric module for causing the photometric device to determine field luminance information;
- a first compensation module for setting a first exposure compensation value based on the field
- 5 luminance information determined by said photometric module;
- a first storage module for causing the image pickup device to carry out a first storage of the light passing through the taking lens, based on the first
- 10 exposure compensation value set by said first compensation module;
- a second compensation module for setting a second exposure compensation value according to a result of the first storage carried out by said first storage
- 15 module; and
- a second storage module for causing the image pickup device to carry out a second storage of the light passing through the taking lens, based on the second exposure compensation value set by said second
- 20 compensation module.